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PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	LLL LLL LLL LLL LLL LLL LLL LLL LLL LL	RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR		<pre>LLL LLL LLL LLL LLL LLL LLL LLL LLL LL</pre>
PPP PPP		RRR RRR RRR RRR	††† †*†	

PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP		DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	
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.title pli\$putedititem .ident /1-003/

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VAX/VMS PL1 runtime library

abstract:

This module contains the pl1 runtime routines to put items to a pl1 stream file under edit controlled format.

author: c. spitz 28-nov-79

modified:

Bill Matthews 23-Oct-1981 V1.4-02:

Added code to clear the recursion bit at the end of an item's processing so that the inline code for the next item is able to call functions which also do I/O.

1-002 Bill Matthews 29-September-1982

Invoke macros \$defdat and rtshare instead of \$defopr and share.

mo

ı

Sdeffcb

Sdefstk

Sdefstr

Sdefdat

Srabdef

Srmsdef

rtshare

local data

; pli\$pute****

;pli\$putechar_r6

; inputs:

outputs:

Sdefaetopt

Sdefcvtind

58 59

61

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PLISPUTEDITITEM
1-003
```

```
16-SEP-1984 02:23:21
6-SEP-1984 11:39:24
                                                         VAX/VMS Macro V04-00 [PLIRTL.SRC]PLIPUTEDI.MAR;1
                                                                                                   (1)
; external definitions
                                                 :define file control block
                                                 :define stack frame offsets
                                                 :define stream block offsets
                                                 :define operand node data types
                                                 ;define get options block
                                                 ;define convert case indices
                                                 ;define rms rab offsets
                                                 :define rms error codes
                                       :sharable
the pli$pute**** routines are called by the compiled code to put items to a stream output file under edit directed transmission. each routine
; pushes the source item descriptor, along with its data type, and jumps ; to pli$$putfmt_r6.
          r0 - address of element to put
          r1 - size/prec of element to put
          r11 - address of stream block
          ap - address of file control block
                                                ;push return address
                                                 ; save source
                                                :set for char source
                                                get format, convert and output field
```

```
91
92
93
                   0000
                                        none
                   0000
                                 side effects:
                    0000
                                        r0-r6 are destroyed
                   0000
                    0000
                               pli$putechar_r6::
0C AC 08 0000015'EF
                            96
97
                                                 #atr_m_recur.fcb_l_attr(ap) ;set recursion flag
                    0000
                                        bist
               9F
                    0004
                                         pushab
                                                 retpütedi
               7D
                    000A
                            98
    7E
          50
                                         MOVQ
                                                 r0,-(sp)
                    000D
                            99
               DD
                                                 #cvt_k_src char
                                         pushl
00000000
               17
                    000F
                                                 g^pli$$putfmt_r6
                           100
         'GF
                                         jmp
                    0015
                            101
                                retputedi:
                           102
               CA
05
                    0015
 OC AC
          08
                                         bicl
                                                 #atr_m_recur,fcb_l_attr(ap) ; clear recursion flag
                    0019
                                         rsb
                    001A
                           104
                    001A
                           105
                                ;pli$putevcha_r6
                    001A
                           106
                                     inputs:
                    001A
                           107
                                        r0 - address of element to put
                    001A
                           108
                                         r1 - size/prec of element to put
                    001A
                           109
                                         r11 - address of stream block
                    001A
                           110
                                         ap - address of file control block
                    001A
                           111
                                     outputs:
                    001A
                           112
                                         none
                    001A
                           113
                                     side effects:
                    001A
                                        r0-r6 are destroyed
```

```
115;
                    001A
                    001A
                            116
                    001A
                            117
                                pli$putevcha_r6::
 OC AC
                    001A
                            118
                                          bisl
                                                   #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
                9F
      F4 AF
                    001E
                            119
                                          pushab retpūtēdi
                                                                              :push return address
                    0021
0024
0026
0020
                            120
121
122
123
               ŽD.
    7E
          50
                                                   r0,-(sp)
                                          DVOM
                                                                               ; save source
          36
               DD
17
                                                   #cvt_k_src_vcha
g^pli$$putfmt_r6
                                                                              set for vchar source
                                          pushl
00000000 GF
                                          imp
                                                                              get format, convert and output field
                    002C
                                ;pli$putebit_r6
                    002C
                                      inputs:
                    0020
                                          r0 - address of element to put
                    ŎŎŽĆ
                                          ri - size/prec of element to put
                    0020
                                          r2 - offset of bit string
                            129
                    0020
                                          ril - address of stream block ap - address of file control block
                    0020
                            130
                    ČÕŽČ
                            131
                                      outputs:
                    0020
                            132
                                          none
                            133
                    0020
                                      side effects:
                    0020
                            134
                                          r0-r6 are destroyed
                            135 ;
                    0020
                    002c
                            136
                    002C
                                pli$putebit_r6::
                            137
 OC AC 55
                    0020
                                                   #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
r2,r5 ;save offset
                            138
                                          bist
               DÖ
                    0030
                            139
                                          movi
               9ř
                    0033
          AF
      DF
                            140
                                          pushab retputedi
                                                                               ;push return address
    7E
               7D
                    0036
          50
                            141
                                          MOVQ
                                                   r0,-(sp)
                                                                              ; save source
               DD
17
                            142
                    0039
                                                  #cvt_k_src_bit
g^pl $$putfmt_r6
                                          pushl
                                                                              :set for bit source
00000000 GF
                    003B
                                          imp
                                                                              get format, convert and output field
                    0041
                            144
                    0041
                            145 ;pli$puteabit_r6
                    0041
                            146 ;
147 ;
                                      inputs:
                    0041
                                          rO - address of element to put
                    0041
                            148
                                          r1 - size/prec of element to put
                    0041
                            149
                                          r11 - address of stream block
                    0041
                            150
                                          ap - address of file control block
                    0041
                            151
                                      ( stouts:
                    0041
                            152
153
                                          none
                    0041
                                      side effects:
                            154
155
                    0041
                                          r0-r6 are destroyed
                    0041
                    0041
                            156
                    0041
                                pli$nuteabit_r6::
                            157
                    0041
 OC AC
                            158
                                          bisl
                                                   #atr_m_recur.fcb_l_attr(ap) ;set recursion flag
      CD AF
               9F
                    0045
                            159
                                          pushab retpūtēdi
                                                                              ; push return address
               7D
                    0048
                            160
                                                   r0,-(sp)
                                          DVOM
                                                                              ; save source
00000048 8F
                    004B
               DD
17
                                                  #cvt_k'src_abit
g^pli$$putfmt_r6
                            161
                                                                              ;set for abit source
                                          pushl
                    0051
00000000 GF
                            162
                                                                              ;get format, convert and output field
                                          jmp
                    0057
                    0057
                            164 :pli$putefixb_r6
                    0057
                            165
                                      inputs:
                    0057
                            166
167
                                          rO - address of element to put
                    0057
                                          r1 - size/prec of element to put
                    0057
                            168
                                          rll - address of stream block
                    0057
                            169
                                          ap - address of file control block
                    0057
                            170
                                      outputs:
                    0057
                                          none
```

PL

```
172
173
                                      side effects:
                    0057
                                         r0-r6 are destroyed
                           174:
                    0057
                    0057
                            175
                   0057
0057
0058
005E
0061
0069
                           176 pli$putefixb_r6::
                            177
 OC AC
                                         bist
                                                  #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
               9F
      B7 AF
                            178
                                                 retpūtēdi
                                         pushab
                                                                             :push return address
          50
               7D
                            179
                                                  r0,-(sp)
                                         mova
                                                                             ;save source
               DD
17
                                                  #cvt_k src_fixb
g^pli$$putfmt_r6
                            180
                                                                             :set for fixb source
                                         pushl
00000000 GF
                            181
                                         jmp
                                                                             get format, convert and output field
                           182
183
                    0069
                                ;pli$putefixd_r6
                    0069
                            184
                                      inputs:
                    0069
                            185
                                         r0 - address of element to put
                    0069
                           186
                                         r1 - size/prec of element to put
                    0069
                            187
                                         r11 - address of stream block
                    0069
                            188
                                         ap - address of file control block
                    0069
                            189
                                      outputs:
                    0069
                            190
                                         none
                    0069
                            191
                                      side effects:
                    0069
                            192
                                         r0-r6 are destroyed
                           193 ;
                    0069
                    0069
                            194
                    0069
                            195
                                pli$putefixd_r6::
                    0069
                            196
 OC AC
                                         bist
                                                  #atr_m_recur.fcb_l_attr(ap) ;set recursion flag
               9F
                    006D
                            197
         AF
                                                                             ; push return address
                                         pushab retputēdi
               ŹD
                    0070
    7E
          50
                            198
                                                  r0,-(sp)
                                         movq
                                                                             :save source
                                                  #cvt_k_src_fixd
g^pli$$putfmt_r6
                    0073
                            199
               DD
                                         pushl
                                                                             :set for fixd source
               17
00000000 GF
                    0075
                            200
                                                                             ;get format, convert and output field
                                         imp
                    007B
                            201
                            202
203
                    007B
                                ;pli$putefltb_r6
                    007B
                                      inputs:
                    007B
                            204
                                         r0 - address of element to put
                            205
                    007B
                                         r1 - size/prec of element to put
                    007B
                            206
                                         r11 - address of stream block
                    007B
                            207
                                         ap - address of file control block
                    007B
                            208
                                      outputs:
                    007B
                            209
                                         none
                    007B
                            210
                                      side effects:
                    007B
                            211
                                         r0-r6 are destroyed
                            Ž12 :
213 :
                    007B
                    007B
                    007B
                            214 pli$putefltb_r6::
                    007B
                                                  #atr_m_recur.icb_l_attr(ap) ;set recursion flag
 OC AC
                                         bisl
      93 AF
               9F
                    007F
                            216
                                         pushab
                                                retpūtēdi
                                                                             :push return address
               7D
                    0082
                            Ž17
    7E
          50
                                                  r0,-(sp)
                                                                             ; save source
                                         DVOM
                    0085
                            218
                                                  #cvt_k src_fltb
g^pli$$putfmt_r6
               DD
                                         pushl
                                                                             :set for fltb source
               17
0000000 GF
                    0087
                            219
                                         jmp
                                                                             ;get format, convert and output field
                    008D
                            220
                    008D
                            221
223
223
224
225
226
227
228
                                ;pli$putefltd_r6
                    0080
                                      inputs:
                    008D
                                         r0 - address of element to put
                    008D
                                         r1 - size/prec of element to put
                    008D
                                         r11 - address of stream block
                    008D
                                         ap - address of file control block
                    008D
                                      outputs:
                    008D
                                         none
```

.end

00B2 00B2

```
side effects:
                   0080
                                        r0-r6 are destroyed
                    008D
                   008D
                   008D
                               pli$putefltd_r6::
               C8
9F
7D
 OC AC
                   008D
                                        bisl
                                                 #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
      81 AF
                   0091
                                        pushab retpūtēdi
                                                                            ; push return address
         50
24
                   0094
    7E
                                                                            ;save source
;set for fltd source
                                        mova
                                                 r0,-(sp)
                   0097
                                                 #cvt_k_src_fltd
g^pli$$putfmt_r6
               DD
17
                                        pushl
00000000 GF
                   0099
                                        jmp
                                                                            ;get format, convert and output field
                   009F
                   009F
                               ;pli$putepic_r6
                   009F
                                     inputs:
                   009F
                                        r0 - address of element to put
                   009F
                                        r1 - size/prec of element to put
                           244
                   009F
                                        r11 - address of stream block
                   009F
                                        ap - address of file control block
                           246
247
248
                   009F
                                     outputs:
                   009F
                                        none
                   009F
                                     side effects:
                           249
                   009F
                                        r0-r6 are destroyed
                   009F
                               pli$putepic_r6::
                   009F
                           OC AC
                   009F
                                                 #atr_m_recur,fcb_l_attr(ap) ;set recursion flag
               9F
7D
    FF6E CF
7E 50
                   00A3
                                        pushab retpūtēdi
                                                                            ; push return address
                   00A7
                                                 r0,-(sp)
                                                                            ; save source
                                        mova
                   OOAA
          00
                                                 #cvt_k_src_pic
g^pli$$putfmt_r6
               DD
                                                                            set for pic source
                                        pushl
00000000 GF
               17
                   OOAC
                                        jmp
                                                                            ;get format, convert and output field
```

```
C 12
   PLISPUTEDITITEM
                                                                                                                                                                                                                                                                                                                                         16-SEP-1984 02:23:21 VAX/VMS Macro V04-00 F
6-SEP-1984 11:39:24 [PLIRTL.SRC]PLIPUTEDI.MAR;1
   Symbol table
ATR M RECUR
CVT K SRC ABIT
CVT K SRC BIT
CVT K SRC FIXB
CVT K SRC FIXD
CVT K SRC FLTD
CVT K SRC FLTD
CVT K SRC FLTD
CVT K SRC FLTD
CVT K SRC PIC
CVT K SRC VCHA
FCB B ENVIR
FCB B ESA
FCB B EXTRA
FCB B IDENT
FCB B IDENT
FCB B IDENT
FCB B NAM
                                                                                                                                                                                                                                                                     SIZ...
STK_L_AP
STK_L_ARG_LIST
STK_L_CND_HND
STK_L_CND_LST
STK_L_DISPLAY
STK_L_FP
STK_L_PC
STK_L_PSL
STK_L_STK_L_STK
STR_L_STACK
STR_L_STACK_END
                                                                                                                                              = 00000008
                                                                                                                                                                                                                                                                                                                                                                                                                 = 00000001
                                                                                                                                              = 00000048
                                                                                                                                              = 0000003F
                                                                                                                                              = 0000002D
                                                                                                                                              = 00000009
                                                                                                                                              = 0000001B
                                                                                                                                             = 00000012
                                                                                                                                              = 00000024
                                                                                                                                              = 00000000
                                                                                                                                              = 00000036
                                                                                                                                                       00000102
                                                                                                                                                      0000012E
0000003D
                                                                                                                                                       000000A6
                                                                                                                                                       00000040
                                                                                                                                                       00000042
FCB_B_IDENT_NAM
FCB_B_NAM
FCB_B_NAM
FCB_B_NAM
FCB_B_RAB
FCB_C_STRLEN
FCB_C_STRLEN
FCB_L_BUF
FCB_L_BUF
FCB_L_BUF
FCB_L_CONDIT
FCB_L_CONDIT
FCB_L_CONDIT
FCB_L_ERROR
FCB_L_ERROR
FCB_L_ERROR
FCB_L_PREVIOUS
FCB_L_PREVIOUS
FCB_L_PRN
FCB_L_PRN
FCB_W_IDENT_LEN
FCB_W_IDENT_LEN
FCB_W_INESIZE
FCB_W_PAGE
FCB
                                                                                                                                                       000000F6
                                                                                                                                                       00000030
                                                                                                                                                       00000062
                                                                                                                                                       00000102
                                                                                                                                                       00000034
                                                                                                                                                      00000000
                                                                                                                                                      00000014
                                                                                                                                                      00000018
                                                                                                                                                      00000010
                                                                                                                                                      000001B2
                                                                                                                                                      000001AE
                                                                                                                                                      00000010
                                                                                                                                                      00000008
                                                                                                                                                      00000038
                                                                                                                                                      0000000
                                                                                                                                                      00000004
                                                                                                                                                      00000034
                                                                                                                                                      00000020
                                                                                                                                                      0000002E
                                                                                                                                                      00000040
                                                                                                                                                      00000030
                                                                                                                                                      AS00000
                                                                                                                                                      00000032
                                                                                                                                                      00000020
                                                                                                                                                      00000028
                                                                                                                                                      00000009
                                                                                                                                                      00000008
                                                                                                                                                      000000A
                                                                                                                                                      00000000
                                                                                                                                                      00000004
                                                                                                                                                                                                                          00000041 RG
 PLISPUTEBIT_R6
                                                                                                                                                      0000002C RG
00000000 RG
 PLISPUTE CHAR R6
PLISPUTEFIXB R6
                                                                                                                                                      00000057 RG
 PLISPUTEFIXD_R6
                                                                                                                                                      00000069 RG
 PL1$PUTEFLTB_R6
                                                                                                                                                      0000007B RG
 PLISPUTEFLTD_R6
                                                                                                                                                      0000008D RG
                                                                                                                                                      0000009F RG
  PLISPUTEPIC_R6
                                                                                                                                                      0000001A RG
  PLISPUTEVCHA_R6
```

00000015 R

RETPUTEDI

Page

00000008

FFFFFFF8

00000000

FFFFFFF4

FFFFFFC

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00000008 00000014

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0000000

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00000408

Psect synopsis!

PSECT name PSECT No. Allocation Attributes ABS 00000000 NOWRT NOVEC BYTE 00 (0.) NOPIC CON **ABS** LCL NOSHR NOEXE NORD Ŏ.) SABSS FFFFFFC 01 NOPIC USR CON (1.) ABS LCL NCSHR WRT NOVEC BYTE EXE RD _PLI\$CODE 000000B2 178.) 02 (USR EXE CON RD NOWRT NOVEC LONG

Performance indicators

Phase CPU Time Page faults **Elapsed Time** Initialization 00:00:00.08 00:00:00.33 00:00:02.25 77 00:00:00.57 Command processing 00:00:06.57 Pass 1 190 Symbol table sort Pass 2 00:00:00.66 00:00:01.42 0 49 00:00:01.22 00:00:02.11 10 00:00:00.09 00:00:00.15 Symbol table output Psect synopsis output 00:00:00.02 00:00:00.02 00:00:00.00 Cross-reference output 00:00:00.00 Assembler run totals 337 00:00:09.21 00:00:21.96

The working set limit was 900 pages.
34430 bytes (68 pages) of virtual memory were used to buffer the intermediate code.
There were 30 pages of symbol table space allocated to hold 574 non-local and 0 local symbols.
258 source lines were read in Pass 1, producing 10 object records in Pass 2.
20 pages of virtual memory were used to define 18 macros.

! Macro library statistics !

Macro library name

\$255\$DUA28:[PLIRTL.OBJ]PLIRTMAC.MLB;1

\$255\$DUA28:[SYSLIB]STARLET.MLB;2

TOTALS (all libraries)

Macros defined

7

7

14

623 GETS were required to define 14 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=TRACEBACK/LIS=LIS\$:PLIPUTEDI/OBJ=OBJ\$:PLIPUTEDI MSRC\$:PLIPUTEDI/UPDATE=(ENH\$:PLIPUTEDI)+LIB\$:PLIRTM

0308 AH-BT13A-SE

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